

## Claims

1. Light source supplied by ultra high frequency, comprising an emitter (4) which, by means of at least one antenna (3), creates an ultra high-frequency electromagnetic wave in a sealed chamber (1) having a wall transparent to light and containing a gas at low pressure, the source comprising magnetic means designed to create a static magnetic field inside the chamber (1), the respective values of the static magnetic field and of the frequency of the electromagnetic wave being predetermined in such a way as to cause an electron cyclotron resonance inside the chamber, source characterized in that the magnetic means are formed by at least one permanent magnet (2) substantially enveloped by the chamber (1) and that the emitter (4), the antenna (3) and the magnet (2) are disposed with respect to the chamber (1) in such a way as to free a solid angle of at least  $2\pi$  steradians for the light.
2. Light source according to claim 1, characterized in that the antenna (3) is arranged inside the chamber (1).
3. Light source according to one of the claims 1 and 2, characterized in that the magnet (2) constitutes the antenna (3).
4. Light source according to any one of the claims 1 to 3, characterized in that the magnet (2) is arranged inside the chamber (1).
5. Light source according to any one of the claims 1 to 3, characterized in that the magnet (2) is arranged outside the chamber (1).
6. Light source according to claim 5, characterized in that the chamber (1) comprises an external housing (7) for the magnet (2).

7. Light source according to claim 1, characterized in that the magnet (2) and the antenna (3) penetrate into the chamber (1) in hermetically sealed manner.

5      8. Light source according to any one of the claims 1 to 7, characterized in that the chamber (1) comprises a fluorescent coating (6) transforming an ultraviolet radiation into a visible radiation.

10      9. Light source according to any one of the claims 1 to 8, characterized in that the chamber (1) comprises a transparent conducting coating (9).

10. Light source according to any one of the claims 1 to 9, characterized in that the source comprises a fine protective meshing (8) protecting against ultra high-frequency radiation.

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11. Light source according to any one of the claims 1 to 10, characterized in that the chamber (1) has a shape chosen from among tubular, hollow cylindrical and oval shapes.

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